

Pushing the Envelope			
2005 Mathematics			
Core Curriculum			
<b>New York Mathematics</b>			
<b>Grade 5</b>			
Activity/Lesson	State	Standards	
History of Aviation Propulsion (pgs. 5-9)	NY	MA.5.5.M.7	Students will use units to give meaning to measurements. Calculate elapsed time in hours and minutes
Types of Engines (pgs. 11-23)	NY	MA.5.5.A.3	Substitute assigned values into variable expressions and evaluate using order of operations
Types of Engines (pgs. 11-23)	NY	MA.5.5.A.6	Students will perform algebraic procedures accurately. Evaluate the perimeter formula for given input values
Chemistry (pgs. 25-41)	NY	MA.5.5.A.3	Substitute assigned values into variable expressions and evaluate using order of operations
Chemistry (pgs. 25-41)	NY	MA.5.5.A.6	Students will perform algebraic procedures accurately. Evaluate the perimeter formula for given input values
Physics and Math (pgs. 43-63)	NY	MA.5.5.N.6	Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems. Understand the concept of ratio
Physics and Math (pgs. 43-63)	NY	MA.5.5.N.7	Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems. Express ratios in different forms
Physics and Math (pgs. 43-63)	NY	MA.5.5.A.1	Define and use appropriate terminology when referring to constants, variables, and algebraic expressions
Physics and Math (pgs. 43-63)	NY	MA.5.5.A.3	Substitute assigned values into variable expressions and evaluate using order of operations
Physics and Math (pgs. 43-63)	NY	MA.5.5.A.6	Students will perform algebraic procedures accurately. Evaluate the perimeter formula for given input values
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2005 Mathematics			
Core Curriculum			
<b>New York Mathematics</b>			
<b>Grade 6</b>			
Activity/Lesson	State	Standards	
Types of Engines (pgs. 11-23)	NY	MA.6.6.A.2	Use substitution to evaluate algebraic expressions (may include exponents of one, two and three)
Types of Engines (pgs. 11-23)	NY	MA.6.6.A.6	Evaluate formulas for given input values (circumference, area, volume, distance, temperature, interest, etc.)

Chemistry (pgs. 25-41)	NY	MA.6.6.A.2	Use substitution to evaluate algebraic expressions (may include exponents of one, two and three)
Chemistry (pgs. 25-41)	NY	MA.6.6.A.6	Evaluate formulas for given input values (circumference, area, volume, distance, temperature, interest, etc.)
Chemistry (pgs. 25-41)	NY	MA.6.6.M.1	Measure capacity and calculate volume of a rectangular prism
Chemistry (pgs. 25-41)	NY	MA.6.6.M.7	Estimate volume, area, and circumference (see figures identified in geometry strand)
Physics and Math (pgs. 43-63)	NY	MA.6.6.N.7	Express equivalent ratios as a proportion
Physics and Math (pgs. 43-63)	NY	MA.6.6.N.8	Distinguish the difference between rate and ratio
Physics and Math (pgs. 43-63)	NY	MA.6.6.A.2	Use substitution to evaluate algebraic expressions (may include exponents of one, two and three)
Physics and Math (pgs. 43-63)	NY	MA.6.6.A.6	Evaluate formulas for given input values (circumference, area, volume, distance, temperature, interest, etc.)
Rocket Activity (pgs. 69-75)	NY	MA.6.6.A.6	Evaluate formulas for given input values (circumference, area, volume, distance, temperature, interest, etc.)

### Pushing the Envelope

#### 2005 Mathematics

#### Core Curriculum

<b>New York Mathematics</b>			
<b>Grade 7</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Types of Engines (pgs. 11-23)	NY	MA.7.7.A.6	Evaluate formulas for given input values (surface area, rate, and density problems)
Types of Engines (pgs. 11-23)	NY	MA.7.7.M.3	Identify customary and metric units of mass
Types of Engines (pgs. 11-23)	NY	MA.7.7.M.4	Students will determine what can be measured and how, using appropriate methods and formulas. Convert mass within a given system
Types of Engines (pgs. 11-23)	NY	MA.7.7.M.9	Determine the tool and technique to measure with an appropriate level of precision: mass
Types of Engines (pgs. 11-23)	NY	MA.7.7.M.12	Determine personal references for customary /metric units of mass
Types of Engines (pgs. 11-23)	NY	MA.7.7.M.13	Justify the reasonableness of the mass of an object
Chemistry (pgs. 25-41)	NY	MA.7.7.A.6	Evaluate formulas for given input values (surface area, rate, and density problems)
Chemistry (pgs. 25-41)	NY	MA.7.7.M.2	Students will determine what can be measured and how, using appropriate methods and formulas. Convert capacities and volumes within a given system
Physics and Math (pgs. 43-63)	NY	MA.7.7.A.4	Solve multi-step equations by combining like terms, using the distributive property, or moving variables to one side of the equation

Physics and Math (pgs. 43-63)	NY	MA.7.7.A.6	Evaluate formulas for given input values (surface area, rate, and density problems)
Physics and Math (pgs. 43-63)	NY	MA.7.7.A.10	Write an equation to represent a function from a table of values
Rocket Activity (pgs. 69-75)	NY	MA.7.7.A.6	Evaluate formulas for given input values (surface area, rate, and density problems)
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<b>2005 Mathematics</b>			
<b>Core Curriculum</b>			
<b>New York Mathematics</b>			
<b>Grade 8</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Physics and Math (pgs. 43-63)	NY	MA.8.8.A.14	Solve linear inequalities by combining like terms, using the distributive property, or moving variables to one side of the inequality (include multiplication or division of inequalities by a negative number)
Physics and Math (pgs. 43-63)	NY	MA.8.8.A.19	Interpret multiple representations using equation, table of values, and graph
Physics and Math (pgs. 43-63)	NY	MA.8.8.G.13	Determine the slope of a line from a graph and explain the meaning of slope as a constant rate of change
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<b>2005 Mathematics</b>			
<b>Core Curriculum</b>			
<b>New York Mathematics</b>			
<b>Grades 9-12 (Algebra)</b>			
<b>Activity/Lesson</b>	<b>State</b>	<b>Standards</b>	
Types of Engines ( pgs. 11-23)	NY	MA.9-12.A.CM.2	Use mathematical representations to communicate with appropriate accuracy, including numerical tables, formulas, functions, equations, charts, graphs, Venn diagrams, and other diagrams
Chemistry (pgs. 25- 41)	NY	MA.9-12.A.CM.2	Use mathematical representations to communicate with appropriate accuracy, including numerical tables, formulas, functions, equations, charts, graphs, Venn diagrams, and other diagrams
Physics and Math (pgs. 43-63)	NY	MA.9-12.A.CM.2	Use mathematical representations to communicate with appropriate accuracy, including numerical tables, formulas, functions, equations, charts, graphs, Venn diagrams, and other diagrams
Physics and Math (pgs. 43-63)	NY	MA.9-12.A.A.15	Find values of a variable for which an algebraic fraction is undefined
Physics and Math (pgs. 43-63)	NY	MA.9-12.A.A.23	Solve literal equations for a given variable
Physics and Math (pgs. 43-63)	NY	MA.9-12.A.A.32	Explain slope as a rate of change between dependent and independent variables

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